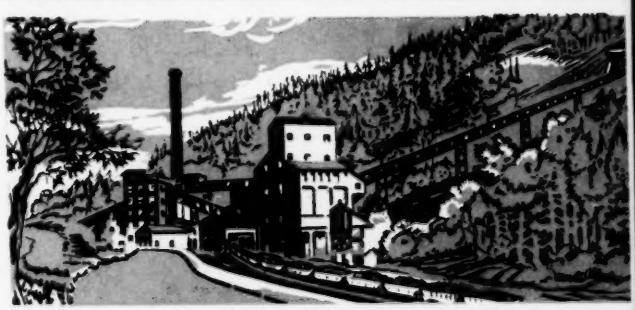
JOURNAL of GEOGRAPHY

for Teachers of ELEMENTARY, HIGH SCHOOL and COLLEGE GEOGRAPHY

Volume LIII

May 1954

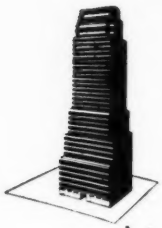
Number 5



A. J. NYSTROM & CO.,

Bartholomew's

ADVANCED ATLAS OF MODERN GEOGRAPHY



now contains more United States maps

Four pages of United States maps and a four-page index supplement covering all their features have been added so that the atlas now contains eight large-scale maps of all sections of the United States on a scale of 1:15 M. or larger. New maps include a one-page map of the North Central states approximately from the Rockies to the Mississippi and a two-page spread of the Middle West states from central Utah and Arizona to the Mississippi Valley, both on a scale of 1:5 M., and a one-page map of the Middle Atlantic states and Southern New England on a scale of 1:2½ M.

by JOHN BARTHOLOMEW— Director, the Geographical Institute, Edinburgh

169 pages **10 x 14¾** **109 maps** **$9.50 (text edition available)**

recent cartographic developments included

1. A completely new system of geographical coordinates used throughout, is simple and effective in pin-pointing any spot.
2. Several new projections, each with a specific purpose, such as portrayal of great circle air routes to the best advantage.
3. Bartholomew's, who pioneered in the use of layer coloring for topographic maps have introduced two new ideas: in addition to the strawberry-pink to emphasize the strategic importance of sub-sea-level land areas, two yellows for shallow sea areas on the oceanic maps elucidate the physiographic relation of land mass to land mass.

The maps were produced by a firm of long standing in the cartographic field, who still use copper plates as the source for their maps.

McGraw-Hill Book Company, Inc.

330 West 42nd Street — New York 36, N .Y.

Send for a copy on approval

Mention the JOURNAL—It Assures Service

The JOURNAL *of* GEOGRAPHY

CONTENTS FOR MAY, 1954

Recent Trends in the Pattern of European Manufacturing. By E. Willard Miller 185

Professor Miller has been chief of the Division of Geography at Pennsylvania State University since 1945. For his article in the *Journal* in November 1949, "Mineral Fuel Situations in the United States," he was granted the Roy Hughes Whitbeck award. His major research works have been in mineral and manufacturing geography.

A Community Study at the Second Grade Level. By Mrs. Ruth Evans 197

Mrs. Evans is a teacher in the first primary cycle in the William Beye School. She took part of her training at the Iowa State Teachers College and is a graduate of Northwestern University.

Three Lessons in Mapping. Lesson III. Relief Patterns. By M. Melvina Svec 199

This is the third in a series of three articles which Miss Svec has prepared on lessons in mapping.

Making a Pace Map—An Activity for the Fifth and Sixth Grades. By H. Phillip Bacon 203

Mr. Bacon's teaching experience covers all grades from the fourth through college. This article is based on activity which he utilized for several years in his fifth and sixth grade classes in geography at the Army and Navy Academy, a preparatory school for boys, in Carlsbad, California.

Construction of a Simple Cyclone Storm Model. By William E. Thomson 208

Mr. Thomson prepared the model under discussion in the Department of Geography, McMaster University and presented it to a geography in education class at Indiana University where he took his Master's Degree.

An Attempt at Making Geographers out of Students. By John Strietelmeier and Alfred H. Meyer 211

Professors Strietelmeier and Meyer are both members of the geography and geology staff of Valparaiso University. Members of the geography profession have been adjusted to expect many new ideas to come from this excellent liberal arts college department. In the April, 1953 issue of the JOURNAL appeared another article on college teaching, namely, "College Geography and Community Planning."

Philippine Prospect. By Alden Cutshall 214

Dr. Cutshall is the senior geography at the University of Illinois in Chicago. During 1950-1951 he held a Fulbright grant for geographic research in the Philippines.

Aqaba. By Samuel Van Valkenburg 222

Professor Van Valkenburg is director of the graduate school of geography at Clark University. He has traveled widely and made many foreign studies.

Edward M. Lehnerts, 1873-1953. By Anastasia Van Burkalow 225

Cora P. Sletten Receives the Distinguished Service Award in Geography Education 226

A Selected Bibliography of Articles Dealing with the Use of Still Pictures in Classroom Teaching 227

Geographical Publications 228

Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals.*

Authors alone are responsible for opinions and statements in the JOURNAL.

PRINTED IN THE U.S.A.

JOURNAL GEOGRAPHY

THOMAS FRANK BARTON, *Editor*
GEORGE J. MILLER, *Assistant Editor*
Indiana University, Bloomington, Indiana

Associate Editors

G. T. RENNER, Teachers College, Columbia University
CORA P. SLETTEN, State Teachers College, Mankato, Minnesota
EARL B. SHAW, State Teachers College, Worcester, Mass.
EDITH P. PARKER, University of Chicago
NEVILLE V. SCARFE, University of Manitoba, Winnipeg
ZOE A. THRALLS, University of Pittsburgh, Pittsburgh, Pennsylvania
HENRY J. WARMAN, Clark University, Worcester, Mass.
CLYDE F. KOHN, Northwestern University
OTIS W. FREEMAN, 2428 Miller Street, Seattle 2, Washington
MAMIE L. ANDERZOHN, William Beye School, Oak Park, Illinois

National Council of Geography Teachers
OTIS W. FREEMAN, 2428 Miller Street, Seattle 2, Washington
INA C. ROBERTSON, *Secretary*, State Teachers College, Valley City, North Dakota

---

SUBSCRIPTION TERMS

The subscription price is $4.00 a year, payable in advance. The price of single copies is 50 cents. Postage prepaid on subscriptions from the United States, Canada, Canal Zone, Republic of Panama, Puerto Rico, Cuba, Virgin Islands of the United States, Dominican Republic, Philippines, Guam, Samoan Islands, Hawaii, Mexico, Costa Rica, Guatemala, Nicaragua, Republic of Honduras, Salvador, Argentina, Bolivia, Brazil, Colombia, Ecuador, Paraguay, Peru, Uruguay, Spain and Spanish Colonies. All other countries in the Postal Union add for postage 27¢ on annual subscriptions (total $4.27), on single copies 3¢ (total 53¢). All subscriptions are payable in United States Dollars.

The JOURNAL is the official organ of the National Council of Geography Teachers and is sent to all members. The annual dues, $4.00, are payable to the JOURNAL OF GEOGRAPHY. Extra postage rates for copies sent to foreign countries should be added to the membership dues. Make all remittances payable to the JOURNAL OF GEOGRAPHY, in postal or express money orders or bank drafts.

Send manuscript and books for notice or review to the Editor.
Send orders for back numbers to JOURNAL OF GEOGRAPHY.

Published monthly except June, July and August

PUBLICATION OFFICES: 450-454 AHNAIP STREET, MENASHA, WISCONSIN

Business Correspondence, Membership Dues, and Subscriptions may be sent to Publication office or to

A. J. NYSTROM AND COMPANY
PUBLISHERS, JOURNAL OF GEOGRAPHY
3333 ELSTON AVENUE, CHICAGO 18

Entered as second-class matter January 15, 1919 at the post office of Menasha, Wisconsin under the Act of March 3, 1879.

JOURNAL OF GEOGRAPHY PRIZES TO AUTHORS

Annually two prizes, of $25.00 each, are awarded for outstanding articles published in the JOURNAL in the previous five years. The prizes collectively cover most aspects of geography and geographic education. They honor the author and a person who contributed notably to the success of the JOURNAL. The prize awards are named in honor of the following: Richard E. Dodge, Ray H. Whitbeck, George J. Miller, J. Paul Goode, Almon E. Parkins, Ellsworth Huntington, Isaiah Bowman, and Cora P. Sletten.

Annually a Geographic Education Prize of $25.00 is awarded for outstanding articles published in the JOURNAL. In the even numbered years the prize is for the Elementary level and in the odd years for the High School level.

The JOURNAL *of* GEOGRAPHY

Copyright 1954, by the National Council of Geography Teachers

VOLUME LIII MAY 1954 NUMBER 5

RECENT TRENDS IN THE PATTERN OF EUROPEAN MANUFACTURING

E. WILLARD MILLER
The Pennsylvania State University

At the conclusion of hostilities in 1945, a large portion of Europe's industrial capacity had either been destroyed or was not functioning at the time. The transportation system, always a primary target for enemy bombs, was severely damaged in many regions. Trade had essentially ceased to exist. Everywhere machinery was worn and obsolete. Since Europe had one of the great industrial economies prior to World War II, it was imperative for the welfare of millions of people that industrial productive capacity be restored as quickly as possible.

BOTTLENECKS TO EUROPEAN INDUSTRIAL RECOVERY

Because of the chaotic condition in the early postwar economy there were many bottlenecks that had to be overcome before manufacturing could resume. Of the early basic problems none were more critical than that of securing necessary fuels and steel as a raw material. It is said that in 1945 and 1946 Europe's need for fuel was second only to its need for additional food. The shortage of coal was one of the greatest limiting factors in the early postwar industrial recovery. While coal supplies were allocated to the most strategic industries, supplies were insufficient for even such critical industries as steel, fertilizer, gas and electric plants. This great shortage was due to the low output of coal in Germany. Consequently the other coal producing nations of Europe took strong measures to increase their production. These actions included improving productivity, development of rehabilitation and reconstruction programs underground as well as on the surface, additional manpower was secured in some countries, absenteeism was discouraged, transportation of coal to consuming points improved,

output of metallurgical coals was emphasized, and a start was made to adjust burning equipment and practices to the use of available types of solid fuels. As a result coal production rose in Europe from about 408 million tons in 1946 to 460,000,000 in 1948 and to nearly 550 million tons in 1950. However, this output was still between 20 and 30 million tons below prewar coal production.

In the postwar period France and Poland had the largest increases. United Kingdom and Belgium were still below their output of the 1930's, and Germany's coal production in 1950 was barely two-thirds that of the prewar period. It is, thus, evident that while coal production was rising in certain countries other sources of energy were needed if industrial recovery were to be achieved.

The development of hydro and thermo electric power and the growing use of petroleum are important developments in the substitution of other fuels for coal in postwar Europe. The increase in the use of electric power since 1938 is common to all European countries. Striking developments have occurred in United Kingdom, Sweden, The Netherlands, Czechoslovakia, Austria, Yugoslavia and Spain, where capacity has been enlarged by more than 50 per cent. Electricity now provides half of Sweden's total consumption of energy and an even greater proportion in Italy, Switzerland, Norway and Finland. From 1938 to 1950 the annual electrical power production in Europe increased from 180 to nearly 300 billion kilowatt hours.

There has likewise been a great increase in the use of petroleum since World War II. Compared with prewar, there has been a rise of more than 50 per cent in the consumption of petroleum products. The most important general reasons for the large increase in European petroleum consumption since the war have been the substantial expansion of truck transportation and the substitution of fuel oil for coal in merchant shipping and in industry. France and Great Britain have had the largest refinery expansion programs but significant increases have also occurred in Italy, Austria, Belgium and Sweden.

As a result of these expansion programs the total consumption of energy has increased considerably since the prewar period. If all energy is converted to equivalent tons of coal, consumption rose from 715 million tons in 1938 to 718 million in 1948, and reached 800 million tons in 1950. Greatest increases in total energy consumption per capita occurred in Norway, Sweden, Poland and

Czechoslovakia. Moderate increases in energy consumption on a per capita basis are shown for the United Kingdom, The Netherlands, Denmark, Switzerland and Austria.

At the conclusion of hostilities all European countries attempted to expand their engineering industries, so that steel was one of the basic raw materials immediately in great demand. However, in the first postwar year output in Europe was but two-thirds the production of 1938. The most significant factor in this decline was the low level of production in Germany which in 1946 was barely 16 per cent of prewar output. Since Germany could no longer supply steel to Europe, many countries increased their steel capacity to supply their own needs and export to deficient areas.

Altho there were many fundamental problems to be solved such as inadequate supplies of coke, iron ore and scrap metal, and difficult means of increasing capacity, steel production has risen by 10 to 30 per cent each year over the preceding year. The low point in production was 1945 when less than 19,000,000 tons of steel were produced. This was essentially 30,000,000 tons below the 1938 level of production. The most important feature of European industrial history in 1948 was a rise in steel production of 10.5 million tons or 28 per cent over 1947. The consumption of finished steel which is the best single indication of the activity of the engineering industries—was in 1948, outside Germany, 42 per cent above prewar levels. The critical steel shortage was, thus, essentially eliminated.

Output has, however, continued to rise from the 45,500,000 tons produced in 1948 to over 59,000,000 tons in 1950. Significant increases have occurred in the United Kingdom, Luxembourg, Poland and Sweden. By 1950 Germany was the only steel producing country that had not exceeded its prewar output; however, production was increasing rapidly.

TRENDS OF MAJOR INDUSTRIES

Textiles

Before the war, the European textile industry occupied a prominent place, not only in the economic activity of Europe, but also in the world textile industry. Altho the European textile industry declined during the 1930's depression, it is estimated that in 1938 this industry employed 3.6 million workers and produced 35 per cent of the world's textiles. The Second World War had a strong adverse affect on the industry in partially dispersing its labor force,

by preventing the replacement of worn out equipment, securing necessary raw materials and by cutting off markets which in the postwar period have been difficult to regain owing to newly developed competition.

At the conclusion of the war the rehabilitation of the textile industry was necessary because of the size of the labor force it employed, the basic human requirement which it provided for, its economic significance and the volume of its international trade. Of the basic textiles the cotton industry has shown a substantial recovery in the postwar period and many countries have surpassed their prewar level of production. A lag in recovery is most noticeable in two of the traditional textile producing nations—United Kingdom and France. The greatest growth has occurred in the smaller nations where output had been limited prior to World War II.

Of more significance has been the notable change in the type of textiles produced in the postwar period. There has been a general displacement of cotton by wool and, particularly, rayon. The increase in cotton goods in 1950 was only six per cent over 1935, compared with 75 per cent by rayon and 27 per cent by wool. Significant advances have been made in rayon production in the United Kingdom, France, Belgium, The Netherlands, Norway, Sweden, Czechoslovakia, Austria and Switzerland. Italy, the major producer in 1938, however, had not attained her prewar level by 1950. Emphasis has been placed on the synthetic fibers because of available raw materials and the demand for this type of cloth.

As the index map of textile production shows (Fig. 1), the 1951 output was substantially above the 1938 level in essentially all countries. Since 1946, the smaller countries such as Ireland, Norway, Sweden, Finland, Denmark, The Netherlands, Belgium, Poland, Hungary and Greece have increased their textile production by 50 per cent or more. However, production in the major producing countries such as the United Kingdom, Western Germany, France and Italy, have had a much smaller expansion. As a result there has been a greater change in the pattern of the postwar textile production than in any of the other major industries of Europe.

By 1950 a crisis was growing in the textile industry and by 1951 it had spread the whole of western Europe. Of manufactured products, textiles were first to be in excess supply in postwar Europe. Retail sales dropped to a low level and supplies increased nearly

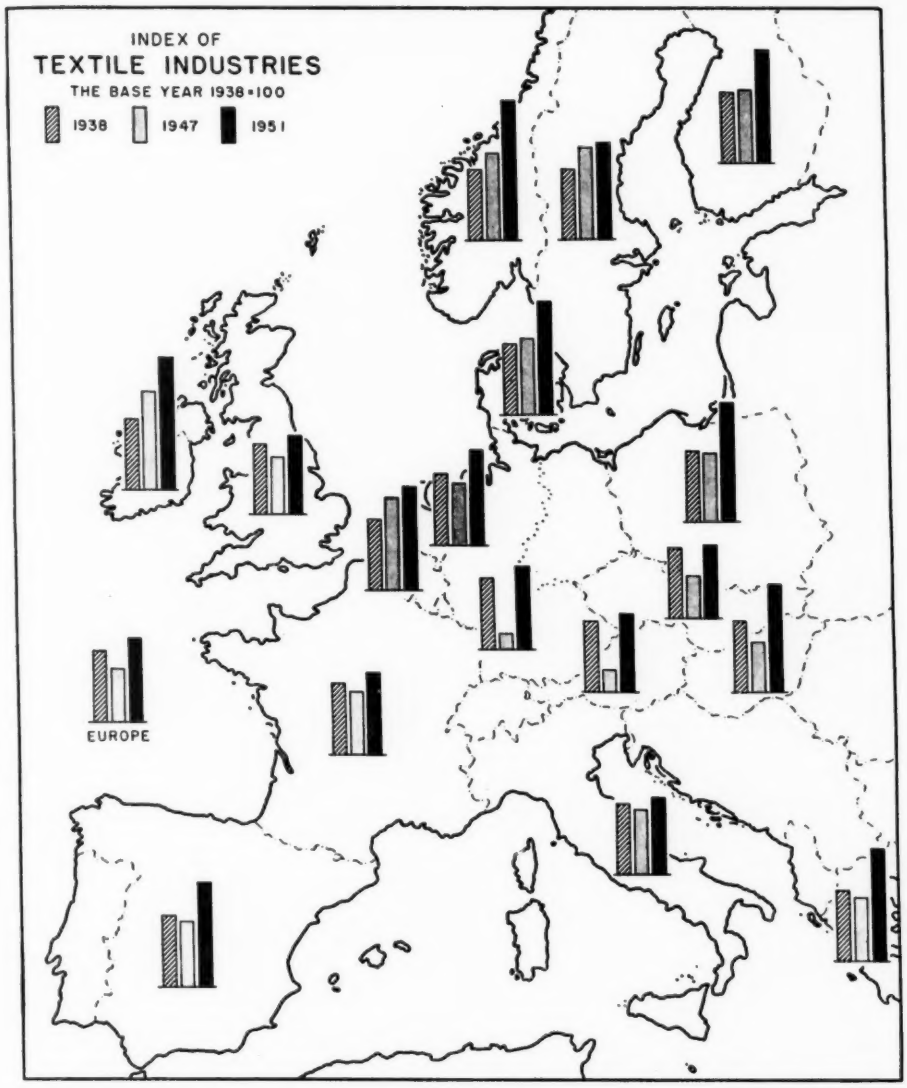


FIG. 1. Increases in the production of textiles in the postwar period are the most notable in the smaller producing nations such as Norway, Denmark, Spain and Poland.

everywhere. Some observers felt that it was a temporary decline, but most believed that the difficulties were the beginning of a long period of depression in textiles due to over expansion after the war.

The situation was most acute in the new, smaller producing countries. In nearly all of these countries, textile production is based exclusively on sales to the home market. For several years after the

war this expanded output was easily absorbed by a domestic market. However, by 1950, this pent up demand was largely satisfied and the larger countries had gained the export markets so that the level of textile production in most of the smaller countries seems to be quite out of line with changes in their real national income and consumption patterns. It seems extremely unlikely that these countries will develop textile exports on a large scale and major structural changes appear unavoidable in the years to come. This prospect carries with it the danger of a revival of textile protectionism in the smaller countries, which in turn would make the great European textile producers still more dependent on exports overseas. The solution of the western European textile crisis is, therefore, closely connected with the outlook for world trade in textiles and with Europe's competitive position in the world market.

Engineering Industries

Because of great destruction and inability to replace worn out machinery during the war years, there has been a heavy demand in the postwar years for products of the engineering industries. Consequently, production in the engineering industries has risen more rapidly than industrial production in general. Germany and Italy are the only nations where these industries lagged greatly during the early postwar recovery. By 1948, with the exception of Germany, the engineering industries of Europe were some 30 per cent above their postwar level of production. However, Western Germany's engineering industry rose rapidly after 1949 and by the end of 1951 was approximately one-fifth larger than in 1938.

Many branches of the engineering industries have shown a remarkable growth. One of the spectacular increases over prewar levels of production has been achieved in the agricultural machinery industries. In 1950 tractor production was six times as great as in 1938 with the result that there were four times as many tractors on European farms as there had been in the prewar period. The United Kingdom provided nearly half of the total output until 1950, but in recent years tractor production has increased rapidly in Germany. With the increased farm mechanization there arose the need for new types of farm implements. As a result production of agricultural machinery has risen so that Europe in 1950 produced about 25 per cent of the world's total in contrast to 15 per cent prior to World War II.

Output of motor vehicles has also had a considerable rise over the prewar period. In the early postwar years commercial vehicles had the greatest expansion, but since 1949 passenger cars have experienced the largest gains. In 1950, passenger car production was 45 per cent above the 1938 level and the stock of commercial vehicles was more than 40 per cent greater than in 1938. In most countries the market price of used cars has continually exceeded the list price of new cars. The limits to European output have been set by capacity to produce and not by demand. In most countries vehicle sales have been restricted in order that there can be a large export trade, particularly, in passenger cars.

Production in other engineering industries has also shown a strong upward trend. The shipyards of Europe, with the exception of Germany and Italy, whose output was restricted, have essentially worked at full capacity. The United Kingdom has produced about one-half of the total output, a proportion somewhat higher than before the war, when German production was considerable. German shipyards began their revival in 1949 and are once again competing with other European shipbuilders. Finally, output of industrial machinery was more than one-third higher in 1950 than in 1938.

In conclusion, let us consider the total trends in engineering production as shown in Figure 2. First, by 1951 all countries of Europe had a higher output in the engineering industries than before World War II. The greatest increases since 1946 occurred in Poland, Austria, Denmark, Netherlands, Hungary and the United Kingdom. It is to be noted, however, that increases in many of the older industrial nations such as France, Italy, Belgium, Switzerland and Germany were moderate.

Chemical Industries

In the chemical industries the most striking feature of the immediate postwar period was the elimination of Germany as an exporter of chemical products from the world market in which she formerly held first place. Because of the dollar shortage combined with war destruction and the general lack of coal and power, there was an alarming deficiency of chemical products and fertilizers in most countries.

Simultaneously with the collapse of European production, demand rose above that of the prewar period. In the case of fertilizers, this was the result of the impoverishment of the soil during the war

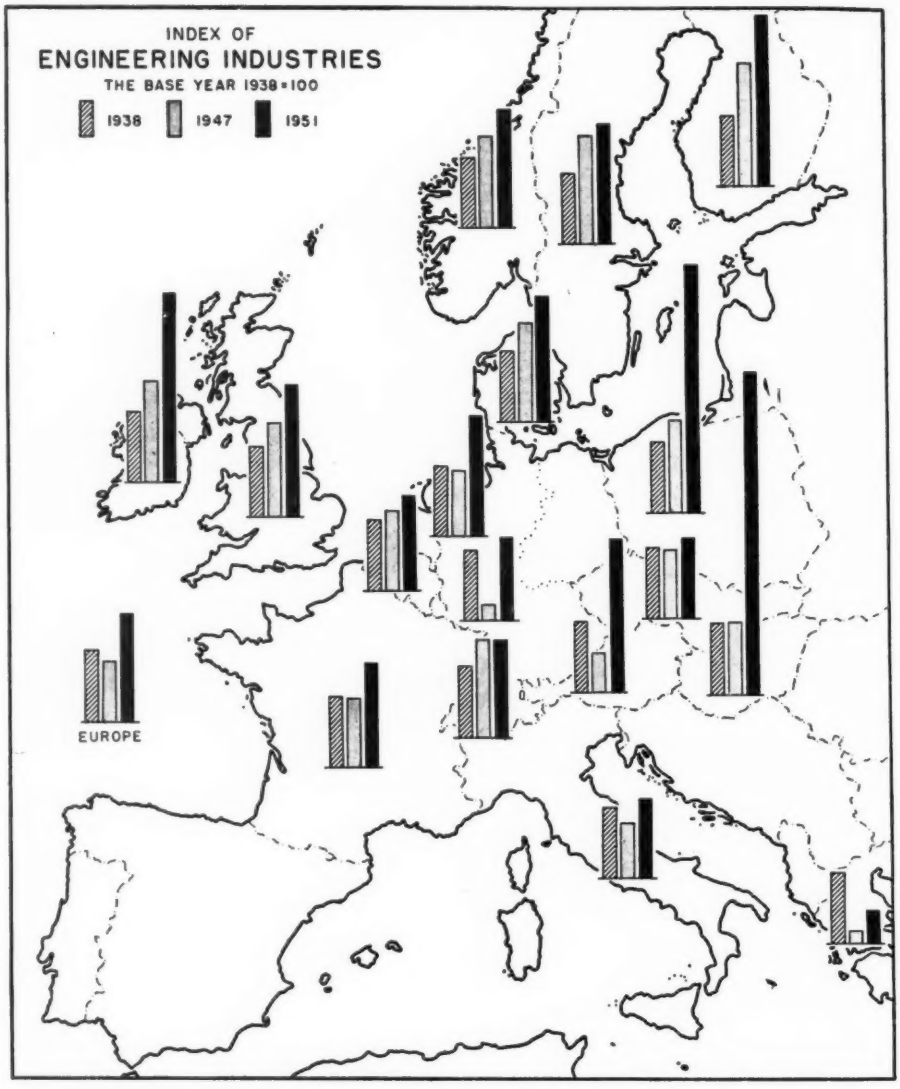


FIG. 2. Engineering industries are expanding in all of the European countries. Notable advances have been in the industrially backward nations.

and of the effort made in most countries for increasing agricultural production to cope with the shortage of foodstuffs. In the case of other chemical products, the greater demand came as a result of technical progress which has greatly increased the various methods of application.

In order to overcome the deficiencies there have been large ex-

pansion programs initiated in all of the fertilizer industries. Most remarkable has been the increases in super phosphate production in Spain, the United Kingdom, Belgium, The Netherlands, Sweden and Finland. By 1950 Germany and France were the only countries that had not surpassed their prewar production, and total European output had risen from 6,900,000 to 8,600,000 tons.

The basic chemical industry has also experienced a rapid expansion. For example, production of sulphuric acid has shown significant increases in Spain, the United Kingdom, Sweden, Finland, Poland and Czechoslovakia. By 1950 total European production was about 15 per cent above the 1938 output. Again, Germany was one of the few countries where output was below prewar levels, but rapid expansion was occurring.

In conclusion consider the index map of total chemical production (Fig. 3). The replacement of Germany by other European countries in supplying their own needs is shown by the fact that in 1947 total European output had nearly reached its prewar level. In each of the postwar years production has increased by 10 to 20 per cent over the preceding year. By 1951 an index figure of 165 was attained when compared with the 1938 output. Greatest gains were experienced by Austria, Finland, Greece, Italy, Netherlands, Poland, Sweden and the United Kingdom. By 1951 Germany had also exceeded its prewar chemical output. Thus, all European countries had risen above their 1938 level of production.

PRESENT PATTERN OF INDUSTRIAL PRODUCTION

While industrial production was on a low level at the conclusion of hostilities in 1945, output has had a generally steady rise in the postwar period (Fig. 4). By 1947 European industrial production was still but 85 per cent of its prewar level. Since then, however, output has risen rapidly so that by 1948 the prewar level of production had been surpassed, and in 1951 the index number of European industrial production was 140 compared with a 1938 value of 100.

The rate of recovery, however, varied considerably with the individual countries. Of the European nations, the greatest relative gains have been achieved by the United Kingdom, Denmark, Norway, Sweden, Finland, Austria and Yugoslavia. The striking industrial growth in such countries as Bulgaria, Hungary and Rumania appear significant largely due to their low industrial output

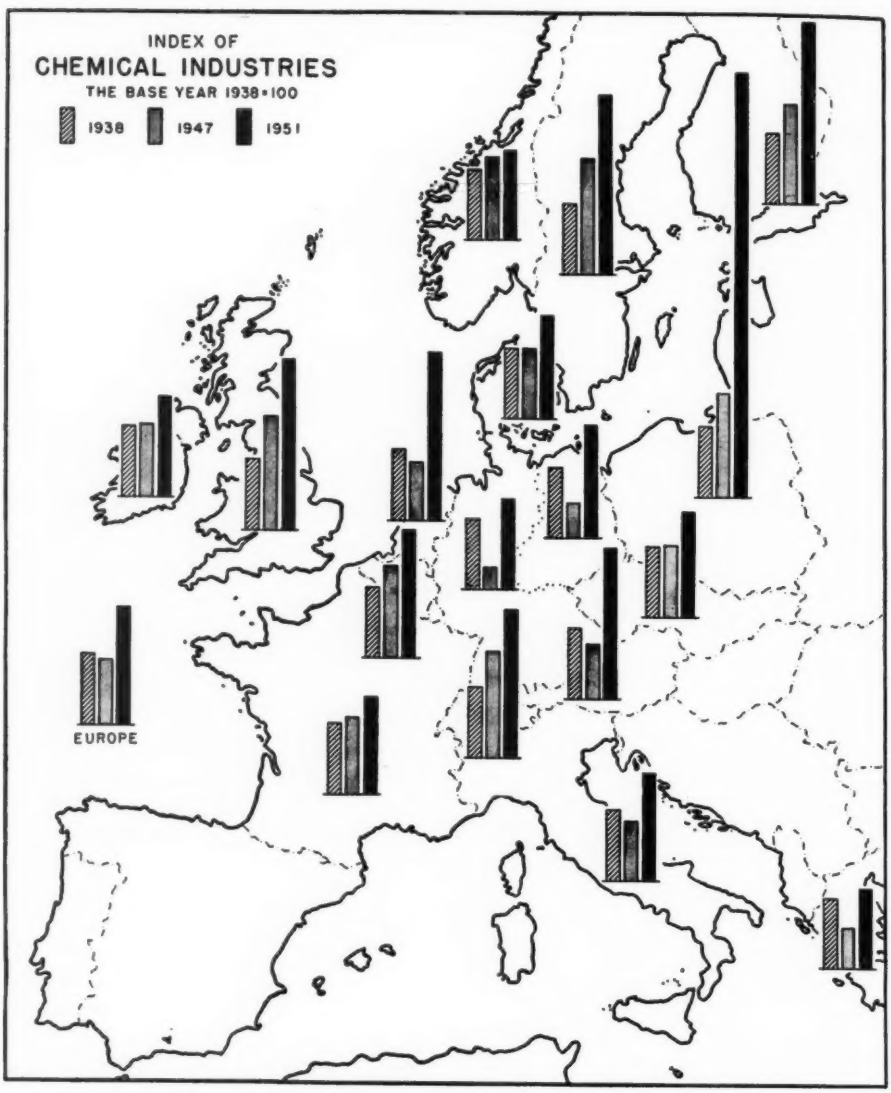


FIG. 3. Expansion of the chemical industries is common to all countries in the postwar period.

prior to World War II, and in Poland, the acquisition of Silesia has greatly strengthened her industrial position. Countries that have experienced moderate expansion include France, Belgium, The Netherlands, Italy and Spain. One of the striking features in the postwar period was the long industrial collapse of Germany where recovery lagged greatly until 1949. In the early postwar years

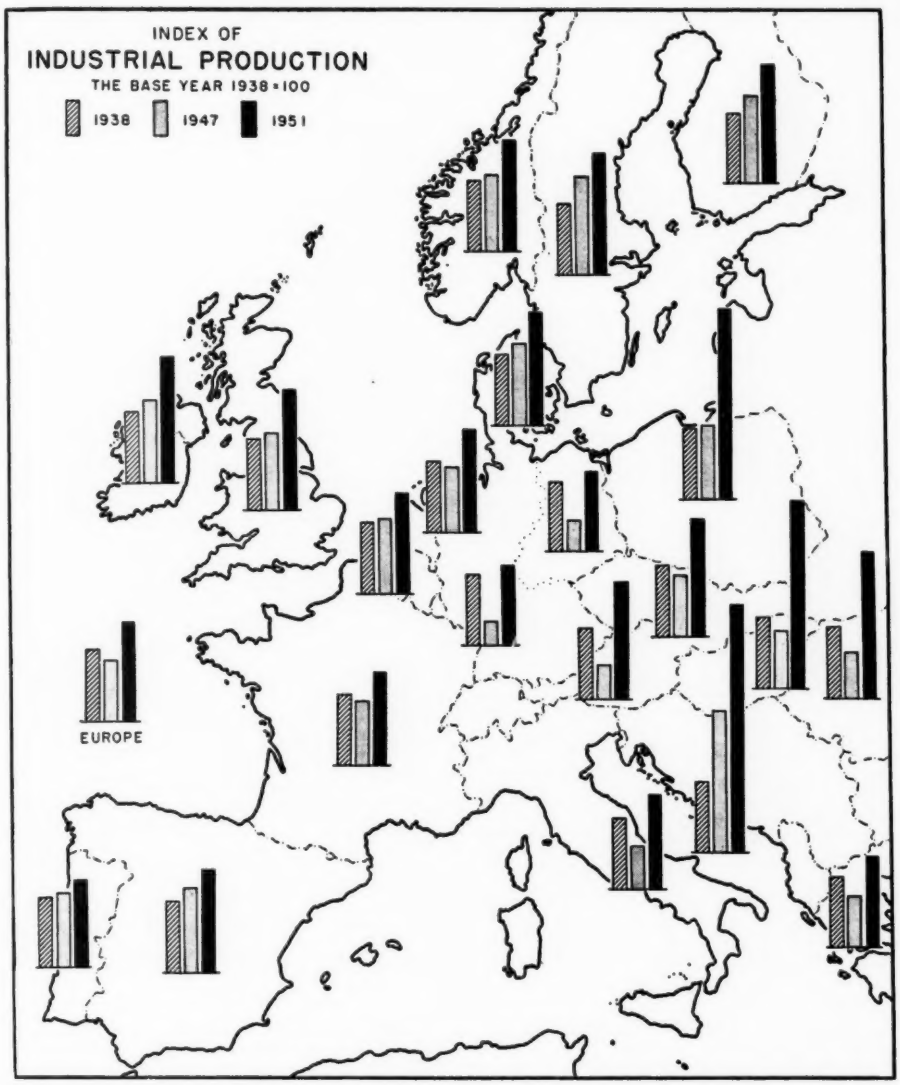


FIG. 4. By 1951 all European countries had surpassed their 1938 level of industrial production. This illustrates a remarkable recovery from the effects of World War II.

heavy restrictions were placed on German industry. Since 1949 these restrictions are gradually being removed, and industrial recovery is now occurring at an accelerated pace.

In the early postwar period it appeared for a short time that a new industrial pattern of production could develop in Europe. This was due to the significant rise of industrial output in many of the

smaller, lesser industrially developed nations and the relative decline in the defeated nations, particularly, Germany. However, by 1951 industrial production was once again centered in essentially the same countries as in the prewar period. Commodity output per person was around $200 of 1938 purchasing power in Northwestern Europe and Western Germany, $160 in western Continental Europe, about $100 in central and northeastern Europe and about $60 in southern and southeastern Europe.

CONCLUSIONS

While this survey shows that there are definite trends of economic recovery in Europe, the signs of recovery now evident may not yet be conclusive that Europe has a stable industrial economy. There are at least three fundamental economic problems that must still be solved. First, there has been no general expansion in the area's international trade; second, there has been essentially no recovery in investment and, in particular, there are no signs that private investment in Europe will soon be able to displace government investment, largely financed by United States subsidies; finally, no solution is yet in sight for the problem of general "overcapacity" in such basic fields as textiles.

An expansion in Western Europe's international trade can be most effectively promoted if the present barriers to intra-European trade are lowered and if the United States eases present tariff and other barriers to purchase from abroad. To stimulate private investment adequately there will have to be a greater confidence about the political and economic outlook of Western Europe, as well as the free world generally. The problem of chronic excess capacity in textiles would vanish if Europe's workers and farmers could enjoy higher real earnings, an improvement which in turn depends upon higher productivity. The general conclusion would seen to be that fundamental improvements of Europe's economy depends upon changes in both the economic and political structures, not only in that area, but also in the rest of the world. The cyclical upswing in Europe's production now evident is indicative, however, of continued economic vitality there, even in the face of fundamental difficulties.

A COMMUNITY STUDY AT THE SECOND GRADE LEVEL

MRS. RUTH EVANS
William Beye School, Oak Park, Illinois

PUPIL-TEACHER PLANNING

Billy was a very curious boy in my second grade. He stood examining the cornerstone of our school building. "Who was William Beye?" he asked. Then, "How long ago was 1889?"

I said, "Let's see if we can find out."

"We'll ask our parents," volunteered Paul. A number of parents had attended the William Beye School but strangely enough, they could throw little light on who was William Beye. It did develop that a daughter of William Beye, Mrs. Hamilton, lived in the vicinity. The children wrote a letter to her inviting her to come to school to tell us about her father, who had been so honored by having his name bestowed on our school.

HISTORICAL ANTECEDENTS

In simple language Mrs. Hamilton told about her father. As a boy he had to fight and work for what little education he received. She told how the irony of escaping military training in Germany worked out so that he served the North in the Civil War. We heard how he married and settled in Oak Park; raised 9 children, providing each with a thoro education, and worked for the best education possible for each child in Oak Park. Our school that bears his name was finished shortly after his death and because of his untiring efforts it was named William Beye.

This was only the beginning of wider interests. The old fashioned school came in for intensive study in contrast to the modern school today. Margaret drew a large picture of our present school. Robert's grandfather hearing about our project sent copies of McGuffy's Reader and the Blue Back Speller. The books fascinated the children and they wondered how anyone could learn to read and spell from them. Nancy brought her grandfather's slate and each had a turn at writing on it. Marilyn told how her father had built a fire each day in his school. This prompted a trip to the boiler-room in our modern building. Before long the children had a comprehensive picture of the old-fashioned school and they were amazed at

the changes which had occurred in one generation. Better still, they appreciated the physical plant which housed them today.

First Experiences in Mapping*

Each day's discussion and study opened avenues of new interests for the morrow.

This unit began the first study of maps for the children. Because of the keen interest in this subject, they became interested in the location of places in their community on the map of Oak Park. Basic concepts of direction, orientation, and distance became concrete experiences. Each child made an individual map of our school district. These were made on paper 12 by 18 inches.[1] Street grids were drawn. Houses and other buildings were correctly located on these streets. Each pupil traced his daily journey to and from school, learning the number of blocks in each direction he traveled along his route. Map orientation and directions were experienced. The actual awareness of short distances became functional in the child's experience. Much to the surprise of all, it was learned that eight north and south blocks in Oak Park were one mile. What fun they had computing and comparing distances from specific points. They discovered that a legend on a map helped them to explain their map symbols.

Each child's home was made by the use of the sixteen square fold. The school and the houses facing it were put in their proper locations. These buildings gave a three dimensional effect.

All of this meant work on the part of the pupils that called for delving into the geography and history of Oak Park, interviewing people, and making observations on their own. It was their own creative interest and work that brought out their power to orient themselves on their own landscape maps.

Conclusion

Best of all, came the time when the children formed committees and together made one large mural-map combining much of what

[1] Approximate scale for the map can be made by using 1 foot to represent 1 block. If a smaller scale is necessary stiff cardboard can be cut to a shorter length for representation of 1 block.

* Editor's note: We all believe map work should begin at an early age. Have you seen *Looking and Doing* (5s. 9d.), *Finding Out* (5s. 9d.), *Exploring the World* (5s. 9d.), and *Globe and Map* (3s.)? These books are written by Olive Garnett, Senior Lecturer in Geography, Froebel Educational Institute, Roehampton, England, and are published by Basil Blackwell, 49 Broad Street, Oxford, England.

they had learned about their school district. This large map oriented with the true directions, and with symbols for the real landscape brought out the abilities of the children to locate many places in the landscape on their map. It developed a willingness of the children to cooperate and work together with a common interest. The interest did not diminish with the completion of the study of the local school for a new path of interest was discovered down which the children sped with awakened interest and new zeal.

THREE LESSONS IN MAPPING

Lesson III. Relief Patterns

M. MELVINA SVEC
State University Teachers College, Oswego, New York

Everyone sees a variety of maps showing relief when reading the newspaper, magazine, and textbook. Each of the four common devices used to show relief range from a pictorial type that is easy to visualize to the more technical type that is more difficult to comprehend. Some ways to show relief are more easily understood than others by young children. Even college students do not grasp too readily the concepts needed to understand some types of relief maps.

The four commonly used devices to show relief are shading, hachure, color layers, and contour (Fig. 1). They have been named in the order in which they are likely to be found most often in everyday reading experiences. By making a sample of each kind, the pupil acquires some knowledge in analyzing the method used, skill in sketching, and ability to understand the meaning of different relief maps. It is a rather simple matter to collect samples of each type from papers and magazines to use as a source of reference and study of the device. Some students have imagination enough to use the various devices that show relief after studying a picture of a landscape!

Shading. The device of shading is one that more nearly looks like a pictorial representation of relief. (Fig. 1A). Mountains appear as if illuminated on one slope while the other slope is in shadow. This gives a feeling of slope, elevation, and even a suggestion of ruggedness. Valleys appear lower than the general elevation of the area. The effect is like that of three dimensional features.

Relief shown by shading is made by holding a pencil in such a way as to make broad strokes. The less upright the pencil is held, the broader the strokes in working with the side of the pencil. The angle of the stroke adds a realistic appearence to ridges and slopes. Figure 1A suggests the appearance of features shown by shading. It is well to avoid scrubbing back and forth in horizontal strokes. For example, the Rocky Mountains would be shown as north-south trending ridges; the Alps would be oriented east-west.

Maps using relief shading give a generalized impression of the lay of the land along a war front, the condition of a route thru rugged terrain, or the lay of land for an irrigation project. Often a touch of color heightens the effect of mountain tops, green valley floors, and forested or rocky mountain slopes.

Hachure. This device has long been used in much the same way as shading maps mentioned in the preceding paragraph. Figure 1B shows a sample of this type. The length of the line and the angle of the line indicate slope. Two things are learned about the slope just from the nature of the line: its direction and its steepness. It may be a little difficult to achieve the feeling of perspective in a sketch but it is a most desirable feature.

Color Layers. Altho maps using color layers appear in most textbooks, the device is probably one of the most difficult to visualize. The common colors are green for elevations from sea level to 1000 ft., yellow for elevations from 1000 ft. to 2000 ft., tan for elevations from 2000 ft. to 5000 ft., dark brown for elevations from 5000 ft. to 10,000 ft., and red for all elevations above 10,000 ft. The line along the color change on the map is an exact elevation level just as a ruled mark shows at what point 2 inches marks off 2 inches. Refer to Figure 1C.

The features to be seen in imagination are such as: 1. all places colored green may be sea level, 500 ft. above sea level, and even 999 ft. or most any elevation in between the numbers given. Places within the green colored areas may be rolling countryside, a hilly city area, a flat plain, a ravine or gully where a creek bubbles over rocks, or a lazy slow-moving river on a wide valley floor. Green does not mean flatness; it only means no higher above sea level than the top of the Empire State Office Building in New York City. If your school is 700 ft. above sea level, your classroom is about as high above sea level as the 60th floor of a skyscraper! If you live in the Red River valley of North Dakota, and if there were no Ap-

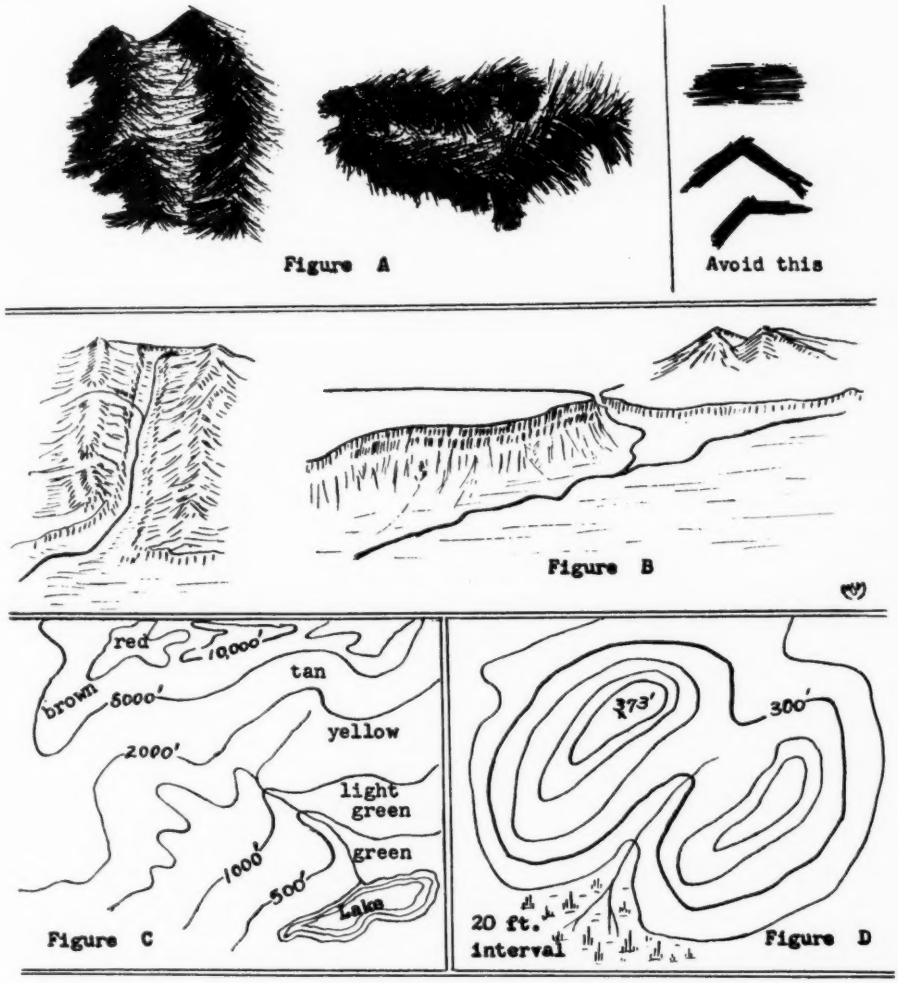


FIG. 1. Ways to show relief.

palachian Mountains in the way, and if you could see more than 1000 miles from New York City, and if you were standing on one of the topmost floors of the Empire State Building, you could see Fargo, North Dakota, as being about on the level with your eye! For another example, the coast of Florida and the coast of Maine are both green on the map. One is a sandy beach, the other is a rugged rock-bound coast.

From a study of this type of relief map the following concepts are clarified: 1. places of the same color have different ranges of elevations but none are lower or higher than the limits of the scale

for that color; 2. elevations gradually rise as one moves toward a higher colored area; and 3. on a change of color, at sea level, and on indicated mountain peaks the only exact elevations are known on maps using color layers for relief.

To make such a map, sketch in the elevation lines marketing off the color layers. Apply colored pencils using the code listed in an earlier paragraph. Keep pencil strokes going in the same direction and smooth out colors by rubbing with a piece of tissue or blotter. Add an appropriate key to show the color layer scale with the elevations on the line of color change placing the lowest elevation reading at the bottom of the scale.

Often a railroad time table lists the elevations of stations along the route. For example, the Union Pacific table gives elevations, and when these places are checked with the wall map color layers, the data serves to reinforce the idea of increase in elevation in travelling toward the Rocky Mountains. Chicago and San Fransicso serve as check points, from an inland lake level to the west coast. The changes of elevation within the same color area and in crossing color layers when checked against the data on this time table certainly provide a thrilling and most rewarding experience for students.

Contour Maps. This type of map seems to be the hardest for students to understand. There is a need for students to know about contour maps and to become familiar with an interpretation of it. For the 4H and FFA students, these maps are used in planning that farm pond, arranging fields for contour plowing, tiling of swamp land and laying out irrigation ditches. For the future pilot the exact elevations of mountains and landmarks to spot in flight are shown. For Scouts and other groups these maps supply details telling where to go, what to see, what to expect in the lay of the land for hikes, camp-outs, and fishing areas. For the defenders of our country, the contour maps are the blueprints of our land and what has been placed on it by man. Only aerial photographs give as complete a record but in a different way.

The sketch in Figure 1D is an example of showing relief by means of contour lines which are usually printed in brown. It is the only kind of relief map that gives exact data about relief. All places thru which the line of 300 ft. crosses are supposed to be 300 ft. above sea level. A study of the pattern of the contour lines tells a reader that the lines that are closest together on the northeast

slope mean a rather steep hill. The wider spaces between the brown lines on the southerly side indicate a more gentle slope. The top of the hill is somewhat flattish since the elevation is given as 383 ft. If the hill were 399 ft., it would be almost 20 ft. higher.

In the December issue of the JOURNAL OF GEOGRAPHY in 1944 there appeared an article suggesting ways to introduce and develop the use of the United States Geological Survey Maps, the source of contour maps of our country.

Students have a use for this type of map at upper grade levels. It is usable when mapping the home area and on field projects. The student will be able to figure out ways and means of running contour lines and of making devices to develop maps using contours. The contour maps serves as a base upon which to construct relief models using salt-flour or other materials. As elevations change, the model is easily built up using the contour lines as guides.

Summary. Each device used to show relief has some limitations either in details or in understanding of them. Each requires imagination that enables one to visualize the actual landscape. All are widely used. All need to be understood and used in the classroom. The age level at which the various kinds are used depends upon the teacher's interest in and understanding of the maps, and upon pupil-readiness.

MAKING A PACE MAP—AN ACTIVITY FOR THE FIFTH AND SIXTH GRADES

H. PHILLIP BACON
George Peabody College for Teachers

Most boys and girls in the fifth and sixth grades enjoy measuring things. They like to count the number of stairs from the first floor to the second, the number of window panes in the classroom, and the number of steps they take crossing the street. Have you ever thought of utilizing this natural inclination to advantage in your classroom activities in geography?

In arithmetic lessons students become acquainted with the principles of measurement. They come to learn the number of inches in a foot and the number of feet in a mile. Too often, how-

ever, this learning process becomes mere memorization and the students do not have an appreciation of the actual distance itself. They fail to comprehend just how far away an object 40 feet really is even though they can figure out that there are 480 inches in the 40 feet. This lack of understanding shows up repeatedly in our geography lessons. If in studying the home community, the teacher can give the boys and girls under her direction an aid in understanding measurement in terms of hundreds of feet, and perhaps a mile or two, it may help them in understanding greater distances. By showing the practical applications of measurement in drawing local maps the teacher can help the children carry over these ideas of measurement in understanding the greater distances involved in learning about their state, the nation, and the world.

THE PACE AS A MEASURING DEVICE

In attempting to teach an understanding of distance in the fifth and sixth grades, we are not so concerned with precise measurement as we are with impressions of distance. One excellent means of acquiring a basic grasp of the meaning of local distance is thru the use of the pace.

A pace is simply one step. In measuring by the pace system one counts every step he takes from the starting point to the object whose distance is being measured. If a child could determine his pace he would have a handy means of approximating distance with some degree of accuracy, without involving the time and equipment that would be necessary in obtaining precise measurements. Boys and girls in the fifth and sixth grades can find the length of their pace and will take great delight in measuring distance with their newly discovered game.

FINDING THE LENGTH OF ONE'S PACE

Before actually beginning to walk over a measured course to determine the length of the pace it is helpful to take the class for a short walk. The children should walk in a normal manner, not attempting to take steps of any specific length. While walking they can practice counting everytime they take a step.

As soon as the teacher feels everyone understands the principles involved, it is time to have the students walk over a measured course. If the high school athletic field is nearby, the teacher has a measured course already laid out for her in the football field or

track. For most of us, however, it is more practical to lay off a 100 foot course somewhere on the school grounds. The boys and girls should walk this 100 feet about 10 times. At the end of each 100 feet, they can stop and jot down the number of paces they took to cover this distance. At the end of the 10 trips, they should sit down, add up the column of figures, and divide the total by 10. This number will, of course, give them their average number of paces for 100 feet. By dividing the average number of paces into 1200, the number of inches in 100 feet, a child can find the number of inches he covers in one pace. This distance can be left in terms of inches or can be converted to feet.

When everyone has determined the length of his pace, the class will want to start taking some measurements. Let the pupils measure the distance from the corner of the building to the swings, or the length of the fence beside the playground. Several teams may want to work together in measuring the length of the sidewalk in front of the school plant. They will want to compare their figures and compete to see who can make the most accurate measurements.

USING THE PACE IN MAPPING

After several simple exercises of this type have been successfully completed, the teacher could suggest that the students might like to use the pace method in making a map of the block, or of the school yard, or of some other conveniently located area.

For mapping by children in the fifth and sixth grades, an area should be chosen that is relatively rectangular in shape to avoid problems which would necessitate the use of azimuths or triangulation. These problems should by no means be avoided in projects of this type carried on by junior high school geography classes, however, since the mathematics involved is not too difficult for even the seventh grade student.

The teacher in an urban area usually has an ideal place for a simple pace map in an ordinary city block. A block that is more or less rectangular in shape is so constructed that the child has no difficulty in making his measurements and in transposing the measurements from his field map to a finished map in the classroom.

In making a sketch map of a block a few commonly used map symbols should be utilized by the young geographers. The symbols found on any topographic map will serve the purpose.

If the class is fairly large the project can be carried out more

easily by letting the children work in pairs. One member of the team can do the pacing and the other can serve as the recorder keeping the field notes.

After the groups are assembled in the section to be mapped, the block should be introduced to the students before actual pacing and mapping begins. Most of the children will not be conscious of how far it is to the elm tree down the street, or to the fire hydrant from the corner where they are standing. Some of the simple exercises in pacing might be quickly repeated for review purposes. Let the groups estimate the distance to an object and then have several of the team pacers measure the distance and report back to the groups where the estimates can be checked against reality. This little exercise will help to bring out the importance of accurate observation in field mapping.

A second practical step prior to the actual survey is to let the teams walk around the block they are to map. The importance of accurate observation of the main features of the block should be emphasized. These main features, or landmarks, such as the school building, houses, a woodlot, and the drugstore on the corner, are the items that will be placed on their map of the block. The team recorder, who keeps the field notes, should draw four lines to stand for each of the four sides of his block. The lines should be labeled with the names of the streets. It will be the duty of the recorder to place the proper symbols on these lines, estimating the approximate distance between landmarks.

With the main features indicated on this preliminary field sketch, the teams will have their landmarks established. They are then ready to determine the actual number of paces between each of the previously established landmarks. The pacer should pace off the distance from the starting point to the first landmark and this distance in paces is then recorded on the field sketch. The pacer can then pace off the distance to the next landmark and the recorder notes the number of paces on his field sketch between the first and the second landmark. This method will be followed for each of the four sides of their block until they return to the starting point.

Making a Pace Scale

When the field pacing is completed the teams have all of the information they need to draw a map of their block. The first problem to be considered is the determination of the scale to which the map

will be drawn. The scale to be used will depend upon the size and shape of the area mapped, the size of the paper on which the map is to be drawn, and the amount of detail to be shown. For most maps of this type in the elementary grades a scale of 1 inch for 100 feet will usually serve the desired purpose.

A very useful device in transposing the information from the recorder's notes to the map at a specific scale is the pace scale. All of the boys and girls should make a pace scale for use in any future mapping exercise. Making a pace scale is not especially difficult, but the teacher will have to help some of the students who have trouble with their arithmetic.

In using a scale of 1 inch for 100 feet, or any other scale, it is necessary to express this scale in terms of pace. If a boy's pace is 2 feet, he will take 50 paces to walk 100 feet; thus, for every 50

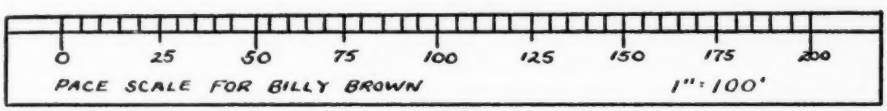


FIG. 1

paces shown on his field sketch, he will mark off 1 inch on his finished map. One pace at this scale will be the equivalent of one-fiftieth of an inch. This boy's pace scale, drawn on heavy paper or cardboard to prevent tearing, might look something like Figure 1.

DRAWING THE MAP

Since the teacher deliberately chose an area for the project which is relatively rectangular, the students do not have to worry about azimuths in drawing their maps. The field notes show the number of paces from one landmark to the next. Each team, therefore, can add the total number of paces for each street and using the pace scale lay off the rectangle on the sheet of paper to be used in drawing the map. With the rectangle laid off, they should return to the starting point on the map and using the field notes find the number of paces to the first landmark. This is then marked off on the map using the pace as the measuring device. The proper symbol should be recorded on the map at the point established for the first landmark to indicate what this point represents. The team then continues following this method around each of the four sides of the rectangle until they return to the starting point. The finished map will give them a scale picture of their block.

Conclusion

When the project is completed, the boys and girls will have a better understanding of the realities of distance. They will have had a practical introduction to field observation and mapping and can thus approach their geography books and maps with the feeling that they, too, are geographers.

CONSTRUCTION OF A SIMPLE CYCLONE STORM MODEL*

William E. Thomson
University of Chicago

One of the difficult problems in teaching meteorology in the geography classroom is to help the students visualize the three dimensions of the atmosphere with its varying structures. They attempt to visualize weather as a two dimensional phenomenon Models and equipment may be used to overcome this handicap. An understanding of cyleonic storms with their warm and cold fronts is basic to understanding many weather conditions. Construction of a cyclonic storm model proved helpful.

Materials Needed

One of the first problems is to choose a material to represent the cold and warm air masses. Such a material must be very flexible, fairly transparent and produced in various colors. Spun glass was chosen as it can be had in colors of blue and red, and when spread thinly over a weather map becomes quite transparent. The red spun glass depicts the warm air mass, while the blue represents the cold.

To show wind directions, arrows were cut out of red cardbroad and mounted on straight pins. Placing the arrows about an inch or so above the surface proved to be quite satisfactory. Black or white cardboard can be cut into irregular cloud formation patterns to represent areas receiving rain or snow respectively. These too can be mounted on pins, so that they rest an inch or so above the surface of the map.

A standard weather map provides a good base on which to build

* This model was prepared in the Geography Department of McMaster University, Hamilton, Ontario, Canada. I would like to express my gratitude to Mr. Reeds and Mr. Woods of that department for their assistance in its construction.

the model. A daily weather map, secured from the Weather Bureau of the United States Department of Commerce, shows the major weather stations of the United States and Southern Canada. Symbols representing all weather conditions of the local areas are printed on the map at each weather station. The map is glued or stapled to a thick piece of cardboard or fibre board to form a soft but firm base for the pins. Then by using the weather station models and their symbols, plus other information such as the pressure areas and fronts printed on the map, a model can be produced.

A MODEL

In the illustrated construction of a model, I have chosen a weather map depicting a typical cyclonic condition in the northern section of the United States (Fig. 1). A fairly well developed cold front stretches across the central portion of the United States, beginning near the southern tip of James Bay in Canada, crossing the

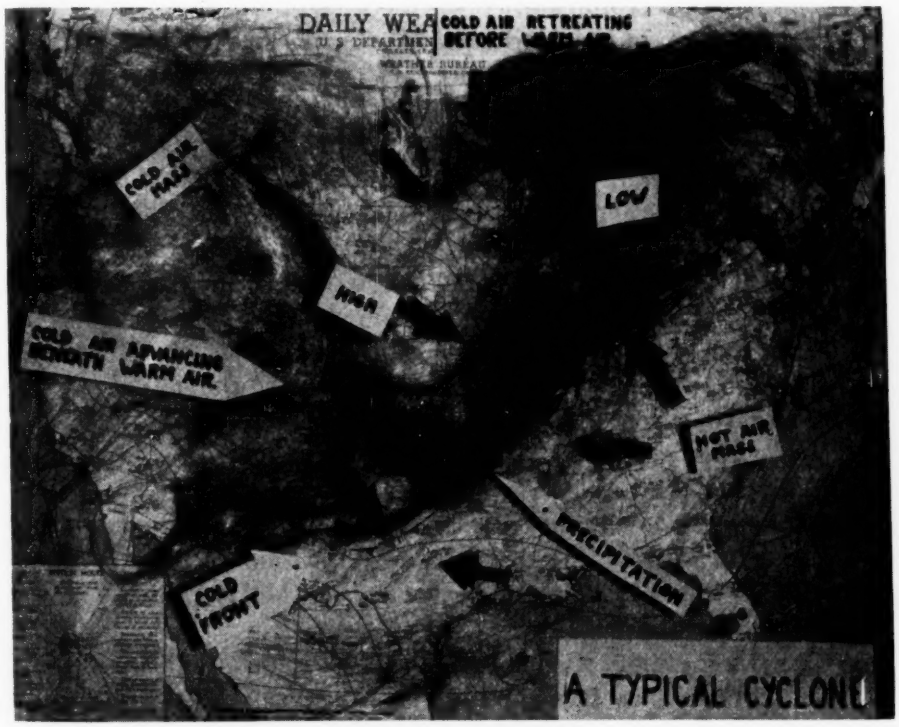


FIG. 1. A model showing the red and blue glass depicting the warm and cold air masses superimposed on a daily weather map. Unfortunately the color does not show in this picture.

lower Great Lakes region and terminating in Texas. The cold front is moving from west to east. A low pressure area is centered above the lower Great Lakes region with a high pressure area over the mid-western United States. This situation then results in a swirling motion of air in a counterclockwise direction in the low pressure area, a basis for a cyclonic condition. By an observation of the temperatures, wind directions and amounts of precipitation printed around the weather stations on the map, the cyclonic condition can be traced.

With this information shown on the weather map and any supplementary information you may secure, the mechanical construction of the weather model can begin. To show wind direction, arrows are cut from red cardboard, the word "WIND" is printed on them, and they are mounted on pins on the map and pointed in the required direction. The same method is used in the mounting and placing of the black and white cardboard for rain and snow, over areas of precipitation.

The next step in the production of this model is to take the blue spun glass and fasten it along the cold front symbol printed on the map. Since the blue spun glass represents the whole cold air mass, allow it to lie over the areas of the United States and Canada to the west of the cold front. The cold air lies close to the earth's surface and on its course to the east, forces itself under the warm air mass. Therefore, the warm air mass, represented by the red spun glass, will lie over the areas to the east of the cold front. To depict the invasion of the cold air below the warm air, allow the red spun glass to overlap the first few inches of the blue spun glass along the cold front symbol. To the north where the actual cyclone is forming, twirl the blue and red spun glass in a counterclockwise motion, so that they will spiral up above the lower Great Lakes region. This spiralling motion will represent the cyclonic conditions forming over the low pressure area. The spun glass is placed thinly over the map so that the weather station symbols and arrows beneath are left clearly discernible, yet not so thickly that the colors become dissipated.

To further clarify the model, small captions pointing to the various features may be mounted on pins so that they are resting above the spun glass. Such captions might point out to the student the cold front, the high and low pressure areas, the hot and cold air masses, the precipitation areas and the actual cyclone center.

To increase its value, the model should be accompanied in the lecture room by suitable and appropriate diagrams and pictures of a similar weather condition. It has been observed that students have been able to grasp the fundamentals of meteorology more readily with the use of such a model. Many other features of weather phenomena besides the typical cyclone can be produced on a three-dimensional scale.

AN ATTEMPT AT MAKING GEOGRAPHERS OUT OF STUDENTS

JOHN STRIETELMEIER AND ALFRED H. MEYER
Valparaiso University

It has long been the assumption of the department of geography and geology of Valparaiso University that, as far as our majors are concerned, our primary obligations are 1. to cultivate critical thinking and geographic understandings of the phenomena and problems of human society, 2. to develop insights into the opportunities and responsibilities of the geography profession, and 3. to prepare students for graduate work.[1]

From the third of these obligations a number of very practical problems arise. But two of this number seem to us most urgent.

The first of these is the problem of helping the student to synthesize his learning. In its very nature, the greater part of undergraduate learning is analytical in nature; and while the necessity of analysis may be freely conceded, the equal necessity of some sort of synthesis is, we feel, too often overlooked. An attempt is made here to exploit to the fullest extent the inherent integrative qualities and functions of the geographic discipline so essential in the Liberal Arts program, especially in the area of so-called general education.

The second of these problems is that of helping the student to transform his thinking and attitudes from those of a spectator to those of a participant in the profession to which, by his choice of a major, he has become apprenticed. It is one thing for the student to look upon geography as a worthwhile field of scholarly work which has a body of knowledge to offer him. It is another, and perhaps more important, thing for the student to see in geography

[1] A departmental major consists of a minimum of 30 semester hours.

the area of his own life's activity and the segment of learning to which he himself owes some obligation to contribute.

In an attempt to do at least something toward the solution of these problems, our department established, five years ago, a course entitled "The Philosophy and Profession of Geography." It is described, in the university catalogue, as "a pro-seminar course treating of the nature and technique of geographic discipline, and the application of geographic training to various professional pursuits, such as teaching, business, planning and governmental service." To ensure that the student will come to the course with sufficient background in geography, admission is limited to juniors and seniors who have had a minimum of 15 semester hours in geography.

The course meets for two hours each Friday. Students are required to submit, at each of the class sessions, a two-to-three page discussion of the day's topic. These papers are graded on the basis of three factors which are considered to be of equal importance: 1. acquaintance with the professional literature which has to do with the topic under discussion; 2. the student's capacity for arriving at logically-consistent views of his own after encountering the divergent viewpoints which are presented in the literature; and 3. the student's ability to express his ideas and views in clear and incisive English.

The papers thus presented become the bases for the class discussion. At their best, these discussions give the students what is, for many of them, their first chance to give and take thoro-going criticism. All of us have a propensity for the bland generalization and the thundering half-truth. It is the purpose of these discussions to help the student to assay what he hears critically and to develop a habit of not allowing an over-generalization to pass unchallenged.

The course is required of all geography majors and is taken normally during the second half of their junior year (there are 17 students enrolled this semester). If the course succeeds even partially in fulfilling its purposes, the student should thus approach the work of his senior year with a professional interest in, and attitude toward, geography. To reinforce this attitude, each member of the class is required to become a member of the National Council of Geography Teachers and thus a subscriber to the JOURNAL OF GEOGRAPHY. We believe that a subtle, but very real, transformation of attitude takes place once a student comes to think of himself as

a member of a professional society and when he once becomes accustomed to keeping up with the professional literature.

After some experimentation in handling the course on a staff basis, each of four staff members assuming proportionate responsibility for a section of the course outline, we finally concluded that the better arrangement is to make one member of the staff responsible for the course with other members of the staff joining in on those sessions which deal with their special areas of interest.[2] The course thus remains a staff enterprise but it gains the important element of continuity which is too often lacking in staff-conducted courses.

The syllabus of the course sets up the following set of topics, each of which is dealt with during a two-hour period:

I. *Geography as a Branch of Human Learning With Particular Emphasis Upon Its Place Within the Social Studies*

First Session: "Assumptions Concerning the Nature of Man and of Human Society." (A brief examination of important schools of thought—behaviorism, capitalism, communism, democracy, evolution, functionalism, positivism, progress, psychoanalysis, rationalism, and science with readings from the *Encyclopedia of the Social Sciences*.)

Second Session: "The Christian Doctrine of Man and Its Relevance for the Study of Man and Society." (It is our assumption that a private university ought to be aware of the integrating factor which justifies its existence and that the validity of this factor should be examined by the various disciplines.)

Third Session: "The Integration of Geographical Knowledge Within a Liberal Arts Program." (Readings for this topic are selected primarily from a number of excellent articles which have appeared in the JOURNAL OF GEOGRAPHY.)

II. *The Nature and Philosophy of Contemporary Geography*

Fourth Session: "History of the Development of Geography as a Discipline." (The readings for this topic are taken from Hartshorne's *The Nature of Geography*.)

Fifth Session: "The Field of Geography as It is Defined by Its Modern Practitioners." (This is our opportunity to raise the perennial question: "What is Geography?" and to introduce the students to the many definitions which have been attempted.)

Sixth Session: "The Techniques of the Geographer."

Seventh Session: "Major Concepts of the Field, with Particular Reference to the Idea of the Compage." (Selected articles primarily dealing with the philosophical aspects of geography in the *Annals of the Association of American Geographers* are assigned readings on the topics covered in the fifth, and seventh sessions.)

III. *The Profession of Geography*

Eighth Session: "Graduate Work in the Major Centers of Geographic Instruction." (This topic provides the student with an opportunity to examine carefully the requirements and offerings of the important graduate departments and gives the staff an opportunity to impress upon the student the necessity of thinking in terms

[2] Note: The staff member in charge this semester is Professor John Strietelmeier, and it is he who prepared the present course outline.—A. H. Meyer.

of graduate work and of orienting his remaining undergraduate work toward that objective. A special detailed syllabus has been prepared to guide students contemplating graduate work.)

Ninth Session: "Opportunities and Requirements for the Teaching of Geography." (Here are used several of the professional papers published by the National Council of Geography Teachers.)

Tenth Session: "Opportunities and Requirements for Geographic Work in Government Agencies." (A number of our graduates who are in government work are kind enough to supply us with firsthand observations of the type of work available to geographers and the procedures for obtaining such positions.)

Eleventh Session: "Opportunities and Requirements for Geographic Work in Regional and Local Planning." (For this topic, as for others under this general heading, geographers who are actively engaged in the type of work under discussion are brought in.)

Twelfth Session: "Opportunities and Requirements for Geographic Work in Industry." (Normally about one-third of geography majors register for another subject major, most commonly business.)

Thirteenth Session: "Professional Societies and the Professional Publications." (We do not apologize for impressing upon the students their responsibilities for the advancement of the field through active participation in the professional societies. We feel that active participation in the activities of our local chapter of Gamma Theta Upsilon provides an excellent foretaste of the activities of the professional societies.)

Fourteenth Session: "Personal and Professional Ethics."

It will readily be seen that the amount of work which is required of the student is rather challenging. This fact, also, reflects one of the purposes of the course. While the student is examining the field of geography critically, we who in a small way represent the field want an opportunity to look the student over also. We conceive it to be as much our responsibility to steer the incompetent, the lazy, and the uncooperative away from geography as it is to help the good, hard-working, well-disciplined student toward the attainment of his professional goals. Altho the course is not primarily designed to do so, it does serve a "weeding-out" purpose.

PHILIPPINE PROSPECT

ALDEN CUTSHALL
University of Illinois, Chicago

The Philippine people find themselves today very much like a man who has suddenly inherited a fortune. They have their cherished and newly acquired independence, but have not quite crystallized their thinking beyond that point. When a man unexpectedly comes into great wealth it takes him awhile just to get used to the idea of being rich, and during that time, he may become the victim of sharksters. So it is with the Filipino leaders and their freedom of

action. They have not quite yet acquired political integrity, in some cases possibly have not truly decided upon their final role in the family of nations.

The new Philippine republic has many problems. Some of them are inherent to physical location, inadequate natural resources or other permanent or near-permanent conditions. They result from the position of the country, off the coast of eastern Asia; or they are related to the fact that the country is not a continuous land mass, but is composed of an archipelago of more than 7000 islands; or they are related to the moist tropical environment of that part of the world. These conditions were obviously known before independence was granted, and these problems certainly were foreseen or anticipated. Other problems are directly or indirectly related to the fact that a major war was fought in that part of the world during the preceding decade. This group of problems was not foreseen at the time the independence act was signed, and at least some of them were not anticipated when independence was granted in 1946.

Much of the turmoil and ferment in the Philippines is not unique with that country. Today the world is in confusion. Especially is there confusion in Asia. In that part of the world nationalism is in flower. The Philippines is a representative illustration. It is only one of the danger spots of the world. In fact, it is not the most serious danger spot. The turmoil and confusion is even greater in Viet Nam, in Malaya and in Indonesia. In many ways it is greater in India and Pakistan, in Iran and Israel.

PEOPLE AND RESOURCES

In most cases it is impossible to understand either the way of life or the national philosophy of any country without some knowledge of: 1. the geographic position and the natural resources of the area; 2. cultural trends and economic development within the country and 3. political antecedents and alignments.

Certain general facts of position and location, of physical resources and economic development, of the people and their political leaders then are basic to the topic under discussion.

The Philippines is a chain or chains of islands in the southwestern Pacific, most of them less than a square mile in size, running roughly north and south. They cover 115,000 square miles, about twice the area of Illinois. The principal islands are: Luzon (40,420 square miles) and Mindanao (36,537 square miles) and the largest city is Manila (population, 1,158,260; July, 1952).

People. The first settlers may have come by land bridges from the Asiatic mainland. They were aboriginal Negrito pygmies. Then, six thousand year ago, came Indonesians in boats to push the Negritos into the interior; the Indonesians, in turn, were pushed back by a wave of Malayans. When Ferdinand Magellan landed on Cebu in 1521 he found a people with its own written language, with a government by tribal law, a strict moral code and a thriving commerce.

Except for the Negritos, the Filipinos are basically Malayan stock with a mixture of Caucasian and Mongolian racial strains. The United States Supreme Court once ruled that they are not Caucasians; the state of California has ruled that they are not Mongolians; the Filipino's own smiling explanation is interesting, namely, that a god and goddess once inhabited the earth, became lonely and decided to create man. They fashioned a man from clay and baked him in the oven, but he was overbaked and came out black (the negroid race). They tried another, but he came out only half-baked and was white (the white race). The third was cooked to a just-right brown. That was the Filipino. But the modern Philippines is a virtual melting pot: Chinese mestizos, Spanish mestizos, American and Japanese mestizos, even an occasional Swiss, German or Norwegian racial strain. I once remarked to a Philippine friend, "You have all kinds of people except the American Indian." He smiled and said, "There is a full-blooded American Indian who is a pilot for the Philippine Airlines."

Religion. With the Spaniards came Catholic priests and today the Philippines are 80 per cent Catholic, but there are some 700,000 Moslems (the proud, independent tribesmen on Mindanao and the Sulu Islands whom the Spaniards named Moros after the Moors of Southern Spain). The remainder includes the Pagans (some 625,000), Buddhists (about 47,000), Shintoists (13,000), Protestants (600,000) and more than 2,000,000 members of the Filipino Independent, or Aglipayan Church, an offshoot of Catholicism.

Natural Resources. The tropical environment includes considerable variety: a few sizeable rivers, both fertile and infertile plains, steeply eroded hillsides, high tree-covered mountains and a few active volcanoes. The Philippines is an agricultural hothouse with a wide range of only partially exploited minerals (gold, copper, chromite, low grade manganese, lateritic iron ore, a little coal). Properly developed, the Islands can support considerably more than the present 20 million people. However, with only limited coal

reserves and unknown petroleum or natural gas resources, industrial development is markedly handicapped.

Agriculture. The principal crops are rice (more of which has to be imported to provide an adequate local supply), abaca (the famous Manila hemp of commerce), copra and coconut oil, sugar, corn and tobacco as well as a variety of tropical fruits and vegetables. The seasons over most of the republic are three in number: hot and dry (March thru June); hot and humid (July thru October); mild and dry (November thru February). Typhoons may occur in any month but are more prevalent from June to November. Attendant crop damage, especially to coconuts, abaca and sugar cane may be quite high.

Political Orientation. The Philippines is a meeting of East and West. The people are basically Oriental in philosophy, but western impact has been significant. It is easily the most westernized country in eastern or southern Asia. To be sure, there is a national language (Tagalog), but English and Spanish are the official legal languages. English is the language of instruction in the schools at all levels of instruction. Many of the textbooks and other materials used in the classroom are published or made in this country. Of those who go outside their own country for advanced study, nearly all come to the United States. Scores of our major league ball games and principal college football games are published in some Manila newspapers. American-manufactured products are available even in remote barrios (villages). Filipino radio listeners hear the Voice of America from Manila or pick up United States west coast stations via short-wave. The Philippine constitution and governmental structure is patterned after our own. The Philippine army table of organization is likewise comparable to that of the United States. American methods and techniques permeate government, education and business alike, but most all of them have been modified, some seriously distorted.

EFFECTS OF WAR

We must not forget that the Philippines were a major battleground in 1944 and 1945. Manila, Cebu, Iloilo, Baguio and other cities were completely destroyed by bombs, offshore shelling and the resulting fires. Thruout the Islands war damage was terrific. Physical structures were destroyed at the time of liberation. Animals and crops had been requisitioned by the Japanese. Education was disrupted. Cultural life was non-existent for four years. In

view of these conditions, reconstruction and rehabilitation have been rapid. Much remains to be done, but in some areas there is no longer visible evidence of war damage. However, there is an underlying of permeating affect that may not be immediately apparent, or at least not immediately associated with the war. The number of guns available for use by dissidents or highway robbers is an aftermath of the war. Petty thievery is rampant; it reflects the training and experience of the war years, when stealing was in some cases necessary for self preservation. School equipment is definitely inadequate; teacher training is retarded. There is a much greater shortage of qualified teachers in the Philippines than in our own country. As in any war-torn country, the conflict has left a permanent scar.

The Philippines Today

The permanent success of an independent Philippines hinges upon many things, both internal and external. After three and one-half years of warfare and Japanese oppression, the people suffered from physical debilitation as a result of improper diet, inadequate medical care, loss of property and war casualties. Temporarily they possessed neither the strength nor the facilities to reconstruct a normal economic life or to reinstate the cultural progress on which a national existence is based. The well-organized educational system was mentioned with pride in 1941. Its restoration alone has presented a major problem in rehabilitation. Even with United States' aid (War Damage Funds) it has not yet reached its prewar position in quality, altho enrollment is far greater than the 1941 total. A better system of education is one of the many problems of the new republic.

Problems of an Independent Philippines

Educational progress is retarded by many conditions. There are many poorly-trained and many over-worked teachers. This reflects in part direct and indirect wartime losses, in part an increased school population which is related to the rapidly expanding population; in part poorly-equipped teacher-training schools and in part inadequate financial aid to schools. The fact that English and the national language are taught in all grades means that some children (in Visayan areas) begin their school work with *two* foreign languages, hardly conducive to the best results, regardless of the quality of instruction.

There is a whole series of related *agrarian problems*. Tenancy, especially in some areas, is high and rents may be exorbitant. The possibility of economic and social advancement for the tenant farmer is remote under these circumstances. Many Philippine lands have been tilled for centuries with little or no fertilization. Soil depletion is a real problem. On the steep hill and mountain slopes the practice of burning and then planting has been and continues to be practiced. Under these conditions resultant soil erosion is extreme. Terracing is practiced in only a few rather isolated areas. Other practices to retard soil erosion are never seen in the provinces where erosion is most severe. Except upon the larger plantations and in a few other isolated instances primitive farming methods prevail. Seed stock is inferior; the animal industry largely is unorganized. Hence, it is necessary to improve the position of the tenant farmer; to encourage agricultural methods that will retard soil depletion and soil erosion and to develop agriculture as a modern scientific industry. This means the adoption and practice of improved farming methods, scientific plant selection and development and better breeding of stock to develop a worth-while livestock industry.

Philippine *economy* thruout recent history has been *geared to a single foreign market*. With an eye to the probable payment of duties on a world market, it is time to pause and consider seriously the possible economic realignments and adjustments that will retard hardship at a later date. This means an encouragement of those agricultural and manufactured products that are needed or can be consumed on the domestic market (basic food products, clothing, shoes and metal products) with a corresponding lessening of emphasis on those products that may compete with difficulty after the duty-free market is no longer available (sugar and lumber).

Mineral resources are varied, but most of them do not occur in great quantities. The current trend to develop hydro-electric power is a wise move because mineral fuel resources are meager. In a country with many highly leached soils a greater development of agricultural limestone and guano resources should rate a high priority.

Transportation problems are manifold. Rail transportation is confined to central and southern Luzon and to Panay. Most freight moves by inter-island steamer or by truck on the national and provincial highways. Perishable products can be marketed only

near the producing area unless they move by air-freight or over paved highways, and paved highways are quite restricted in both location and total mileage. City transportation is extremely crowded. Manila, with a population of more than a million, has no subway, elevated or street railway system. This places a tremendous burden upon motor busses and jeepneys. Traffic is further complicated by the fact that there are only three automatic traffic lights in all the Manila area (1951).

Problems related to the development of manufacturing are largely technical and financial. Governmental aid to industries that have not and probably would not be pioneered by private capital is helpful. Cement and cotton textiles are illustrative. However, to what extent can one justify governmental entrance into industry, other than hydroelectric development? In a majority of the major Philippine manufacturing plants, top scientific and management personnel is largely non-Filipino (American, Spanish, Swiss and German). This arrangement tends to breed jealousy and creates tension. A sound industrial policy must encourage: 1. the processing of insular raw materials rather than the exportation of raw materials, 2. the development of those industries that can supply local needs and demands and 3. the technical training of stable Filipinos to operate the new and possibly the established industries.

There are real problems in the realm of political affairs. A *divided political philosophy* at the national level is apparent. For the most part the Department of Foreign Affairs is strongly pro-American, and hence pro-Western. This reflects the past relationship between the two countries and the basic democratic ideals of the Filipino leaders. Yet there are other leaders who feel that the ties with Asiatic nations, particularly the new nations of southeast and southern Asia, should be stronger. Since the Filipino leaders are strongly anti-Chinese and, since 1941, anti-Japanese, this leaves the adherents of a pro-Asian policy subject to criticism, because it is actually "pro-part-of-Asia"—"anti-part-of-Asia."

In part, this national policy, or lack of it, has resulted from a *lack of* public officials with *real leadership* in national and international affairs. Manuel Quezon was such a leader. So was Surgio Osmeña at the time he was younger and able to exert real leadership. Probably Manuel Roxas would have been able to follow the Quezon-Osmeña tradition, but his untimely death left a near vacuum that no one has yet been able to fill. The political stature

of Elpidio Quirino increased markedly during his presidency but he was never a leader of all the people, rarely a leader of the majority of them. Carlos Romulo is certainly a capable leader, but he has been outside the Philippines so consistently the past 10 years that he has no real following at home. It has been said that he and his ideas receive a greater audience in America or in western Europe than in the Philippines. Ramon Magsaysay, elected President by an overwhelming majority in November, 1953, was the people's candidate and may provide real leadership.

Possibly this lack of real political leadership is related to the *lack of personal integrity and moral responsibility* of Filipino politicians in general. The elected official and the political appointee has tended to use his office as a means of personal financial gain or as a means of futhering his political career. Salaries are low, so bribery and graft have been commonplace. At times, this has been especially true in the Customs Service, and also in the Department of National Defense (especially prior to the appointment of Ramon Magsaysay to head the department in late 1950) and in many other branches of the government. In fairness, however, it must be stated that conditions have shown improvement in the past year or two. The national election in 1951 was the first fair post-war Philippine election. The 1953 election was equally free.

The *dissident problem* (Huks) is still a major one, but certainly it is more nearly under control in 1952 and 1953 than was the case in 1950. The persistent efforts of the Philippine army to dislodge the outlaws from their mountain hideouts and to capture the leaders has been at least partially successful. Several leaders have been killed or captured. Some of the followers have surrendered under Magsaysay's amnesty plan and have been granted homestead rights in a special resettlement area on Mindanao. Nonetheless, the so-called Huk problem is still a real problem to internal security in some of the mountainous provinces.

CONCLUSION

The Philippines have historical and political ties with the United States. Those ties are strong. But geographically the islands are in the Orient. Neither we nor they can escape that fact. American ties with the Philippine republic will continue to be extremely close. Economically and politically the two countries have common interests. By mutual consent an associate-nation relationship has

evolved. It is likely to continue. The American position in the Philippines in 1952 is not radically different from the American position in 1902. It was then and it still is a United State's observation post off the coast of Asia.

The Philippines has a Malayan social structure with a variable veneer of western civilization. Democracy, as we know it in the United States, may never exist in the Orient. Their democracy may be more of the Latin-American variety, not necessarily the Argentinian variety. In brief, the Philippines as a nation is on trial. Indirectly, America, the foster parent of that new nation, is on trial too. The experiment can succeed. With qualification and modification, it will succeed.

AQABA

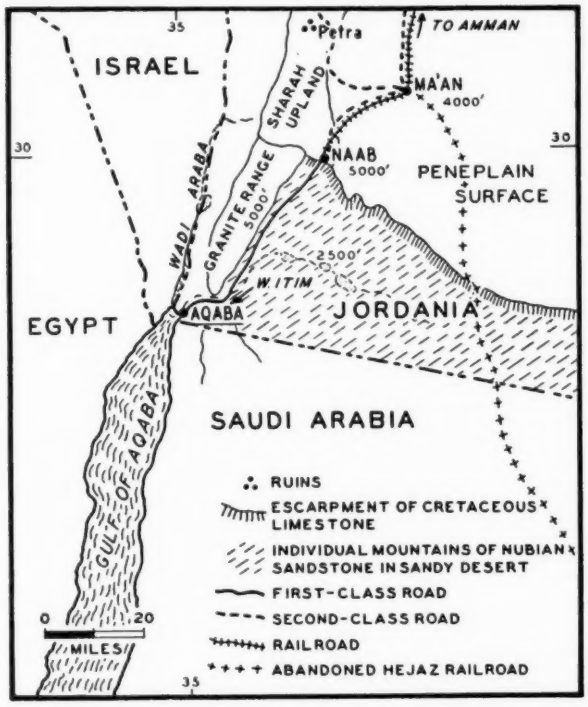
SAMUEL VAN VALKENBURG
Clark University

One of the places I wanted very much to visit during my stay in the Hashemite Kingdom of Jordania was Aqaba, the only part of this nation located at the top of the gulf of that name, the eastern of the two branches of the Red Sea which border the Sinai triangle. There were several reasons for that desire besides curiosity. One of these was the fact that four countries come so close together that it is only a good walk between the two farthest apart if such a walk would be permitted. Unfortunately two of the three boundaries (Israel-Egypt and Israel-Jordania) are still in the stage of an armistice agreement and cannot be crossed at all, while the third one (Jordania-Saudi Arabia) has never been recognized by the latter country, which is still protesting against the annexation of this territory by Jordania in 1925. Another reason of interest was the fact that the British in 1941-1942, when German-Italian armies threatened Egypt, started to prepare a front here to be used in case Egypt fell. The following is the story of how I came to Aqaba and what I saw.

FROM MA'AN THRU NAAB TO AQABA

We, an Arab companion and I, had come the preceding day to Ma'an, southern terminal of the Jordanian railroad which goes

northward to Amman, the capital, and to Damascus in Syria. We had come by car, a Chevrolet pickup truck which was powerful but rather jumpy, over the bad roads. Ma'an is a small town on the piedmont between the mountains to the west and the desert to the east. It is a market place for Bedouins and has had strategic significance thru history. Otherwise it lacks any attraction; stone or mud houses and a few trees near the main spring. Around it is the desert as the rainfall is only between three and four inches. We left early the next morning, following something too good to be called a trail but not good enough to be called a road. We drove parallel to



a side branch of the railroad, which was constructed by the British, to a point called Naab on the edge of the high limestone escarpment (see map); from there an excellent road connects the station with Aqaba. Products arriving in Aqaba are brought by truck up the road and then transferred to the train. All this is part of the planned second front I have mentioned before. The descent down the escarpment is quite scenic. To the west are high granite mountains which border the Wadi Araba Drift, and in front to the south is a most spectacular landscape. A former sandstone surface (red

nubian sandstone) has been eroded into individual mountains of fantastic shape which stand as towers amid a desert basin of sand. This basin has one outlet, the Wadi Itim, which finds its way thru the granite mountains in a seemingly superimposed course. Rainfall is very low (Aqaba has less than two inches) but occasional rainstorms can be very heavy as is indicated by the masses of stones and gravel moraines which follow the bed of the wadi as fluvial side deposits. Last winter such a storm destroyed part of the road and hundreds of workers were busy putting it back into shape. The wadi has its outlet in the Wadi Araba, part of the great rift, the northern continuation of the Gulf of Aqaba which leads to the Dead Sea and Jordan Valley. A few miles more and Aqaba is reached and with it the shore of the brilliantly blue gulf.

AQABA

Again the town is disappointing. It is quite small—only an accumulation of mud houses. Along the shore are a few hundred date-palms, watered by wells of partly brackish water. On the shore there are two or three better built houses. One is a rest home and one of the others is the fish plant. Fish of great variety, which is typical for warm seas, is brought in, frozen solid, and then shipped by plane to the Amman market. It is only a small enterprise because the prices are too high for a large sale, but it is well run. The refrigerated rooms (temperature 40°F) were filled with all kinds of fishes. I recognized octopus, red snapper and a kind of lobster. The lobster catch was just discontinued because the only expert had been killed the day before in a fight between local tribes. The plant also sold ice, which was greatly appreciated in an afternoon temperature of 110°F. Next to the plant is a landing pier for the tender which serves to unload ships. I was lucky because a small British freighter, which comes once a month, had come in the day before and was unloading sugar, cement and some machinery. Otherwise, very few ships come to Aqaba. The approach is rather difficult because of coral reefs and the costs of transportation high. Plans to improve the harbor have been made by experts of the United Nations, but I have little confidence that Aqaba will become a lively port.

A BRITISH CAMP

Outside Aqaba, facing Israel, is a British camp. For a time this was an important British station, but there is, at present, only one

battalion left. Nevertheless, these troops had prevented Israel annexing the harbor in the war of 1948. For Britain this is still the entrance to a country which is quite friendly to her. The Jordanian army, the famous Arab Legion, is the best fighting unit of the Arab world and owes a great deal of that strength to British officers who direct it. The camp looks surprisingly cheerful with neat barracks, sportfields and clubhouses and the spirit is quite good as I discovered talking to several soldiers I met in Ma'an and on the road. The commanding officer seemed pleased to have a visitor, and we discussed world politics while drinking cold lemonade. This does not mean that the British have become tea-totalers, but it was still before noon, and anyway it is one of the best drinks on a hot day. Across the gulf we looked at the new Jewish settlement—white houses and an airfield. Israel plans to start shipping here but the Gulf of Aqaba is only several miles wide in spots, which leaves one mile between the territorial waters of Saudi Arabia and Egypt; a rather risky affair in an atmosphere of hatred.

That was all there was in Aqaba. Not much, but still enough to make the trip worthwhile. In a world conflict, if that ever comes, Aqaba will again come alive as one of the keystones of British defense. Now it sleeps quietly with only an occasional ship interrupting the dream of palm trees and dark blue waters.

EDWARD M. LEHNERTS
1873-1953

Edward M. Lehnerts, Professor Emeritus at Hunter College, died on December 21, 1953. For 54 years he had been a teacher, starting in a one-room school house in Winona County, Minnesota, and continuing at Minnesota State Normal School at Winona (1896-1907), the University of Minnesota (1907-1917), Columbia University (1917-1922), Teachers College at Columbia (1918-1924), and Hunter College (1920-1942). At Hunter he founded the department of geology and geography and served faithfully as its chairman until his retirement, winning the esteem and affection of both colleagues and students. His qualifications for heading a joint department of geology and geography were unusual. After having taught geography for some years he became increasingly interested in geology, took graduate work in that field at Chicago and Columbia Universities, and did intensive research in the geology and geomorphology of the Adirondacks.

With his commanding presence, his beautiful and often poetic language,

his wide knowledge and experience, and his great love for both students and subject, Professor Lehnerts could hold his students spellbound when he talked to them about the earth. He was equally skilled in encouraging them to think and work independently. Always he emphasized field studies. During his years in Minnesota he organized and led many large summer field parties —in Minnesota ("See Minnesota First") and in the national parks ("See America First"). He initiated a program of field trips at Columbia and Teachers College; and at Hunter he introduced a field course in the geology of New York City and vicinity and a summer field course in the Catskills and Adirondacks.

Professor Lehnerts left enduring reminders of his life work. He was founder and editor of the *Bulletin of the American Bureau of Geography* (1900-1902), forerunner of the Journal of Geography. In 1902 he collaborated with Richard E. Dodge and J. Paul Goode in founding the Journal of Geography, of which he was co-editor (1902-1904) and then, for some years, associate editor. At Hunter College, whose two centers were both built during his years there, the quarters for geology and geography and the associated meteorological observatory are far superior, in their physical lay-out and equipment, to those found in most undergraduate colleges—a result of Professor Lehnerts' constant devotion thru the years as well as his skilled planning and concentrated effort at the time the buildings were constructed. Hundreds of young people who never knew him have used these unusual facilities, and as the years pass many more will benefit unconsciously from his wise and untiring service as first chairman of the department. Those earlier hundreds who, like the writer, were his students, will never forget the inspiration they gained from this man, who was a Christian gentleman, a scholar, and a gifted teacher.

Anastasia Van Burkalow

CORA P. SLETTEN RECEIVES THE DISTINGUISHED SERVICE AWARD IN GEOGRAPHY EDUCATION

The Distinguished Service Award is made to those who have given distinguished service to geographic education. This year the committee, by unanimous decision, chose Cora P. Sletten as recipient. This is the highest honor that the National Council can bestow. Miss Sletten has had a long and highly successful career as a teacher and in service to geographic education. She has been president of the National Council and served, for many years, as assistant editor of the Journal of Geography.

In her own state of Minnesota, her influence in the State Council,

in the preparation of the official state course of study, in a text on the Geography of Minnesota and a series of articles on the State Parks, has been continuous and effective.

As teacher and student counselor she was a master. Miss Sletten possesses that rare quality which has enabled her to criticize an erring student and have that student return to her as a devoted friend. Her fine qualities of friendship, devotion, reliability and willingness to help in any situation, and her inspiring leadership have endeared her to students and fellow faculty members alike. Her interest in people, her enthusiasm for geography and the zest with which she has always met the experiences of life have made for her both a professional and a personal place among geographers.

DISTINGUISHED SERVICE AWARD COMMITTEE (1953)

A SELECTED BIBLIOGRAPHY OF ARTICLES DEALING WITH THE USE OF STILL PICTURES IN CLASSROOM TEACHING

This pamphlet, published by the National Council of Geography Teachers as Special Publication No. 2., contains sixty (60) annotated references to articles which have appeared in the JOURNAL OF GEOGRAPHY and in some other magazines.

These references are arranged under four headings: I. JOURNAL OF GEOGRAPHY Articles devoted entirely, or nearly so, to a consideration of pictures as educational aids; II. JOURNAL OF GEOGRAPHY Articles which devote a major portion of the articles to some phase of the use of still pictures in teaching geography; III. Articles in recent issues of the JOURNAL OF GEOGRAPHY which make reference to the use of pictures; and IV. Articles in recent issues of magazines other than the JOURNAL OF GEOGRAPHY which deal with the use of pictures in teaching.

Within each of the first two groups, the references are further classified under one or more of five headings which indicate the major theme of the article to which reference is made. Under these five headings are indicated: A. Articles which are devoted to a consideration of the values to be achieved thru the use of still pictures; B. Articles which set forth criteria for judging and selecting pictures; C. Articles which consider the filing and storage of pictures; D. Articles in which the classroom display of pictures is discussed; and, E. Articles which give consideration to the techniques of teaching thru the use of pictures.

The Council voted, at the 1953 meeting in Buffalo, to distribute this publication as a bonus publication to members of the National Council of Geography Teachers. Such bonus publications may be selected by new members at the time of joining the NCGT and by those who are now members at the time of renewing their annual membership.

Copies of this publication are also available from the Secretary of the National Council of Geography Teachers for 50 cents a copy.

GEOGRAPHICAL PUBLICATIONS

Minna Colvin and Woolf Colvin. **Geography in Our Modern World.** Cambridge Book Company, New York, 1953. iv and 424 pages, 20 maps and illustrations in red, black and white, about 100 black and white maps, charts and illustrations, index. $.85 paper cover, $1.85 cloth cover.

Geography in Our Modern World is a high school text designed to foster good citizenship thru: 1. "an understanding of the earth as a home of mankind," and 2. "the role each citizen plays as a worker in refashioning the earth." It is divided into eleven units: 1. The Earth as the Home of Man; 2. The Union of Soviet Socialist Republics; 3. The Far East; 4. Western Europe; 5. The Mediterranean Basin; 6. Africa; 7. Australia and New Zealand; 8. Latin America; 9. The United States and Canada; 10. Toward a Better World; 11. Economic Citizenship.

In the units dealing with the eight regions of the world, the authors have skillfully woven together the history, politics and economics to give the student a total picture of the region. Unit 11—Economic Citizenship—is divided into the following chapters: 1. The Individual as a Consumer; 2. Public and Private Spending; 3. Choosing a Career; 4. Problems of Capital and Labor.

For each unit there are "Key Words," "Fact Questions," "Thought Questions." Occasionally "Map Exercises" and "Objective Tests" are provided.

The illustrations are accompanied by captions which supplement the text and pertinent questions which lead the student to give substance to an idea.

The readable textual material together with the clear explanations to students and assistance to teachers in the presentations of new concepts should give *Geography in Our Modern World* wide appeal as a useful and timely text or reference book in the geography laboratory.

VIVIAN S. GREENHOE

Manistee High School
Manistee, Michigan

J. B. Jackson, Ed. **Landscape.** Elm St. Press, Woodstock, Vermont. $.50 per copy, $1.50 yearly.

Teachers of geography may not have run across a publication now in its third year, that comes from New Mexico. It stresses illustrations, and the text is written to appeal to the layman, but the editor has so firm a grasp of geography that every number also presents arresting ideas for the serious student. A readable article is likely to direct the mind toward a novel viewpoint, while beguiling the eyes with attractive and well-reproduced photographs, drawings and maps. The book reviews breathe the same freshness. Each issue carries five or six brief articles and a like number of reviews. Together they deal with all parts of the world and a wide range of topics. This periodical is *Landscape, Magazine of Human Geography*. It flies at the masthead its credo: "Human Geography is the Study of the Earth's Surface and Modified by Man the Inhabitant." The editor is J. B. Jackson and the address is Landscape, Box 73, Santa Fe, New Mexico. Subscription price, $1.50 (3 issues yearly).

DERWENT WHITTLESEY

Harvard University

Cordier • Robert Histories

HISTORY FOR THE BEGINNER
HISTORY OF YOUNG AMERICA
HISTORY OF WORLD PEOPLES
HISTORY OF OUR UNITED STATES

Four histories for the middle and upper elementary grades that tell the story of man's progress, of cause and effect, and of life and living in the world yesterday and today.

RAND McNALLY & COMPANY

P.O. BOX 7600 • CHICAGO 80 • ILLINOIS

INDIA AND PAKISTAN

A General and Regional Geography

By O. H. K. SPATE
Australian National University

Filling the vital need for a comprehensive, up-to-date study of India and Pakistan, this new volume is not only vastly informative and authoritative, but fascinating reading as well. Its 827 pages are divided into four sections: The Land; The People; The Economy; The Regions, preceded by author's Preface and 36-page Introduction.

Frontispiece, 1 folding and 160 text maps, 24 tables.

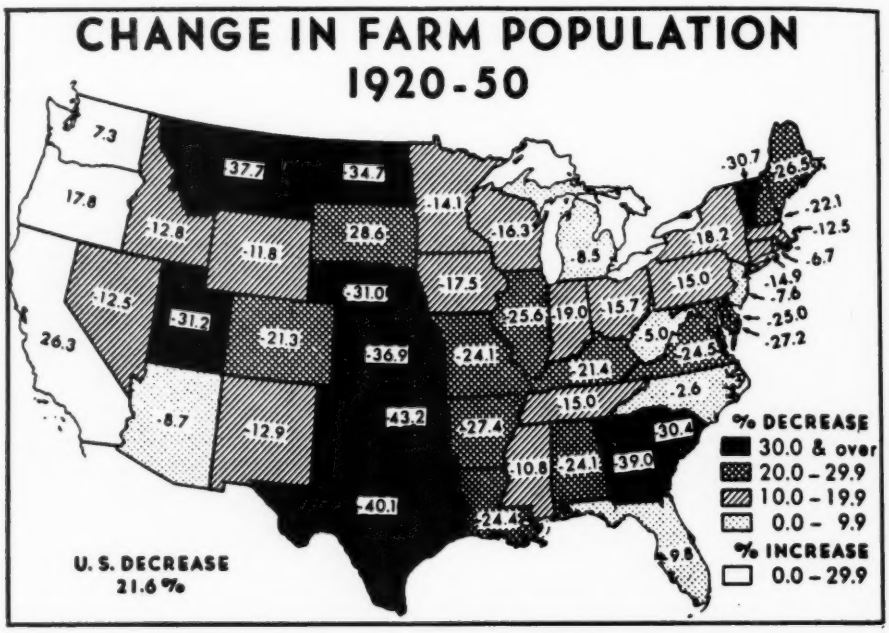
E. P. DUTTON & CO., INC.

300 Fourth Avenue **New York 10, N.Y.**

Tell Advertisers You Saw It in the JOURNAL

EDITORIAL NOTES AND NEWS

Great and highly significant changes in our farm population occurred during the three decades from 1920 to 1950, as shown by data compiled by the Census Bureau and the Agricultural Marketing Service (See map). Our farm population reached a peak of 32.5 million in 1916 and a low in 1950, when it was only 25.0 million. Only three states, California, Oregon and Washington, show an increase. Ten states lost more than 30 per



cent of their farm population. The loss in the Great-Plains States is shown strikingly on the map. During the period total food production increased 30 to 40 per cent and total population from 131.6 million to more than 151 million. Estimates indicate a total population of about 160.5 million at present, of which farm population comprises about 15.6 per cent. Estimates also indicate that our population is increasing at the rate of about 3 million a year. Can the decreasing farm population continue to produce sufficient food and fibers for a rapidly increasing total population? Do we have sufficient uncultivated land that can be brought into production to meet the needs? Here are a couple of problems for your students to consider.

We all believe map work should begin at an early age. Have you seen *Looking and Doing* (5s. 9d.), *Finding Out* (5s. 9d.), *Exploring the World* (5s. 9d.), and *Globe and Map* (3s.)? These books are written by Olive Garnett, Senior Lecturer in Geography, Froebel Educational Institute, Roehampton, England, and are published by Basil Blackwell, 49 Broad Street, Oxford, England.

Coronet Films, 65 E. South Water Street, Chicago 1, Illinois, has announced the release of its fifteenth anniversary catalog of 16mm sound motion pictures. It is available without charge to schools and other training institutions. The 80-page illustrated catalog describes 546 teaching films, classified according to grade levels and subject areas.